

Application No. 09/941,474
Amendment dated October 4, 2004
Reply to Office Action mailed May 3, 2004

REMARKS / ARGUMENTS

Introduction

The present Amendment is in response to the Office Action mailed May 3, 2004. The Office Action rejected claims 1-6, 8-16, and 21-25. Claims 1, 5-6, 9-11, 12-13, 16, 21, and 24 are amended. Claims 7, 17-20, and 26 were cancelled previously. Claims 1-6, 8-16, and 21-25 are currently pending.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Please note that the following remarks are not intended to be an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed below are presented solely by way of example to illustrate some of the differences between the claimed invention and the cited references. In addition, Applicants request that the Examiner carefully review any references discussed below to ensure that Applicants' understanding and discussion of the references, if any, is consistent with the Examiner's understanding.

Rejections Under 35 U.S.C. § 102

Claims 6, 8-13, 16, and 21-23 were rejected under 35 U.S.C. § 102(c)¹ as being anticipated by U.S. Patent No. 6,400,867 to Liu. Anticipation, as discussed in M.P.E.P. § 2131, requires that "[a] claim is anticipated only if each and every element as set forth in the claim is

¹ Because *Liu* is only citable under 35 U.S.C. § 102(e), Applicants do not admit that *Liu* is prior art to the claimed invention, but reserve the right to swear behind *Liu* if necessary to remove it as a reference.

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found, either expressly or inherently described, in a single prior art reference.” *Verdegaul Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The following discussion illustrates that Liu does not satisfy the requirements of *Verdegaul*.

Liu is directed to providing “angular freedom of movement at the interface between optical parts to seamlessly and continuously perform orientation adjustment. . . .” See col. 2, lines 38-41. The specification of the present invention also indicates that the center wavelength of an optical filter is dependent on the angle of incident light. See page 3, lines 13-14. However, “tilting optical filters in applications such as dense wavelength multiplexing is disfavored since the light reflected from the filter is often utilized as well as filtered light passing through the filter. If the filter is tilted in an attempt to adjust the CWL, often the reflected light cannot be aligned correctly.” See page 3 line 18- page 4 line 2.

While embodiments of the invention are not precluded from being tilted, embodiments of the invention can redirect incident light to a second location without tilting. This is not taught or suggested by Liu, which instead teaches that an optical fine tuning operation is achieved by adjusting the incline angle between the optical axis of the filter and the optical axis of the dual fiber optical component. See col. 4, lines 31-36.

For example, Claim 6 requires:

an optical element being affixed to said module such that an axis of said optical element is offset from said center of rotation of said module, wherein said optical element has an end having a convex surface that fits with the concave surface of the module such that the optical element can be rotated about said center of rotation of said optical element while maintaining contact between the convex surface of the optical element and the concave surface of the module, wherein said axis of said optical element enables light to be directed to one or more locations on said optical element as said optical element rotates about said center of rotation of the module;

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Claim 6 thus requires that the axis of the optical element is offset from the center of rotation of the module. Because the axis is offset, light can be directed to one or more locations of the optical element as the optical element rotates about the center of rotation of the module. This is achieved by rotating the module rather than, as taught by Liu, tilting the filter.

For example, Figures 4 and 2B illustrate one embodiment of an optical element being affixed to a module. In Figure 4, the filter module 428 has a thin-film filter 426. The thin-film filter has an axis (427) that is offset from the center of rotation 408 of the module 428. Figure 2B illustrates the ability to redirect light to one or more locations. In Figure 2B, the rotation about the center of rotation of the module 208 enables the thin-film filter to be rotated to at least one of the first location 1 and the second location 2.

In other words, the axis of the thin-film filter is offset from the center of rotation of the filter module. As the filter module rotates, light is redirected to a second location on the thin-film. In fact, Figure 2B illustrates that the light traces the path 306 on the thin-film filter as the module rotates about the center of rotation.

Thus, the center wavelength response can be changed without having to tilt the filter module or the thin-film filter. Liu, in contrast, teaches that "the incline angle between the optical axis of the filter 135 and the optical axis 130 of the dual fiber optical component can be smoothly and continuously adjusted." See col. 4, lines 17-19. Because Liu does not teach claim 6, Applicants respectfully request that the rejection under 35 U.S.C. § 102(e) be withdrawn and that claim 6 be allowed. Any claims depending from claim 6 are also believed to be in condition for allowance.

For at least these reasons, Liu also does not anticipate claims 12, 14, 16, and 21. In contrast to the teachings of Liu, for example, claim 12 similarly requires that "the filter has an

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axis that is offset from a center of rotation of the filter module” and that the filter module can be aligned by “rotating the filter module within the ball end joint about the center of rotation to select a desired response”.

Claim 14 requires that “said center of said filter is offset from said center of rotation of said optical element” and that a predetermined response can be selected by “rotating said module about said center of rotation.”

Claim 16 requires “said optical means having a predetermined response at a position offset from said center of rotation” and “means for rotating said module about said center of rotation until a desired response from said optical means to said incident light is achieved”.

Claim 21 requires that “the first location offset from a center of rotation of the source” and “positioning the optical element by at least rotating the optical element about the center of rotation using the ball end joint so that the light beam is incident at a second location”.

Thus, Applicants respectfully request that the rejection of claims 12, 14, 16, and 21 under 35 U.S.C. § 102(e) be withdrawn and that claims 12, 14, 16, and 21 be allowed. Any claims depending from claims 12, 14, 16, and 21 are also patentably distinct for at least the same reasons, and are in a condition for allowance.

Rejections Under 35 U.S.C. § 103(a)

Claims 1-5, 14, 15, 24, and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Liu. For at least the reasons discussed above, Liu does not teach or suggest the claimed invention. As stated above, Liu teaches that “the incline angle between the optical axis of the filter 135 and the optical axis 130 of the dual fiber optical component can be smoothly

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and continuously adjusted." See col. 4, lines 17-19. This teaching is in contrast to simply rotating the module or the optical element, which does not introduce tilt.

For example, claim 1 requires:

a filter module that contains a thin-film filter having a specified response at a first location and a second response at a second location, wherein a first end of the filter module has a convex surface configured to fit with a concave surface of a second optical module, wherein the thin-film filter has an axis that is offset from a center of rotation of the filter module such that either the specified response or the second response of the thin film filter can be selected as the filter module is rotated about the center of rotation

Claim 1 thus requires that the thin film filter can be rotated to at least one of the first location and the second location as the filter module is rotated about the center of rotation. A thin-film filter with an axis that is offset from a center of rotation of the filter module is not taught or suggested by Liu for at least the reasons discussed above. Claim 1 is believed to overcome the rejection under § 103 and allowance is respectfully requested. The dependent claims 205 are allowable as they depend from claim 1.

Claims 14, 15, and 24-25 have requirements similar to claim 1. Claim 14, for example, requires that "said center of said filter is offset from said center of rotation of said optical element" and that a predetermined response can be selected by "rotating said module about said center of rotation." Claim 24 requires that "the incident light beam can be incident on a plurality of locations of the filter as the housing rotates about the center of rotation" and that "the center of the filter does not coincide with the center of rotation of the housing".

For at least the reasons discussed above, claims 14 and 24 overcome Liu and are in condition for allowance. Claims 15 and 25 depend from claims 14 and 24, respectfully, and overcome the cited art for at least this reason.

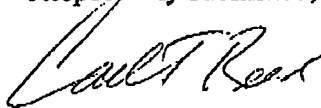
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Conclusion

In view of the foregoing, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 4th day of October 2004.

Respectfully submitted,



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